

**REMARKS**

**I. Status of the Claims**

Claims 15, 16, and 18-26 are currently pending in this application.

**II. Rejection Under 35 U.S.C. § 103**

Claims 15-16 and 18-26 stand rejected under 35 U.S.C. 103 (a) as unpatentable over U.S. Patent No. 4,715,686 to *Iwashita* in view of U.S. Patent No. 4,023,977 to *Mercurio*, as evidenced by *Mark* (Encyclopedia of Polymer Science and Engineering). Applicants respectfully disagree with this rejection and traverse at least for the following reasons and further in light of the enclosed 37 C.F.R. § 132 Declaration.

The Examiner alleges that it would have been obvious to one of ordinary skill in the art to have used the cellulose ester film of *Mercurio* as the cellulose ester protective film in the polarizing plate laminate in the invention of *Iwashita* in order to obtain a tougher polarizing plate laminate. The Examiner recognizes that *Iwashita* fails to teach that its cellulose ester film contains methyl acrylate polymer and, thus, relies on *Mercurio's* cellulose ester (acetate butyrate) and methyl methacrylate oligomer to fill this void. The Examiner, however, has not established a *prima facie* case of obviousness in showing that there is a suggestion or motivation to make this combination or that there would be a reasonable expectation of success in the combination. M.P.E.P. § 2143.

Accordingly, Applicants respectfully traverse this rejection.

*Iwashita* simply teaches a liquid crystal display (see example 5) and a polarizing plate each employing a conventional cellulose ester film (see example 8). The main

object of *Iwashita* is to provide a display device including a glass plate which has been treated against reflection and which has been caused to adhere to the front surface of a light-passive liquid crystal display element by the use of a material which has substantially the same index of refraction as the materials of the glass plate (see column 2, lines 12-16). *Mercurio* teaches a cellulose ester film with a polymer of less than 5,000 weight average molecular weight comprising methyl acrylate monomer, and discloses the cellulose ester film for coatings in order to lower the melting point and improve the flow of hard high molecular weight polymers (see column 1, lines 8-11).

The present invention provides a polarizing plate or a liquid crystal display containing a cellulose ester film as claimed which provides the excellent results of the invention as shown in Table 1 on page 100 of the specification, *i.e.*, excellent retardation, excellent retention property, and minimization of foreign materials or stains. As is apparent from the above, the object of the invention is quite different from that of *Iwashita* and that of *Mercurio*.

*Iwashita* does not disclose a cellulose ester film containing any additive such as a plasticizer, much less the cellulose ester of the claims. Further, known are numerous plasticizers of polymers, and it is difficult to expect what kinds of plasticizers can provide the excellent results of the invention described above. *Mercurio* does not disclose application of the cellulose ester film to the polarizing plate or the liquid crystal display as claimed nor the excellent results of the invention as described above.

In view of the above, it would not have been obvious to one of ordinary skill in the art to combine *Iwashita* with *Mercurio* with an expectation that the excellent retardation,

excellent retention property, and minimization of foreign materials or stains as described above would be attained.

The Examiner further contends that the data present in the Declaration previously filed was not commensurate in scope of the cited reference combination of *Iwashita* in view of *Mercurio*. Applicants provide in the enclosed Declaration additional comparative data for the Examiner's consideration.

As is apparent from the Declaration, results unexpected to one of ordinary skill in the art are obtained by the invention. Thus, the combination of *Iwashita* with *Mercurio* fails to support a *prima facie* case of obviousness. Accordingly, Applicants respectfully request withdrawal of this rejection over claims 15-16 and 18-26.

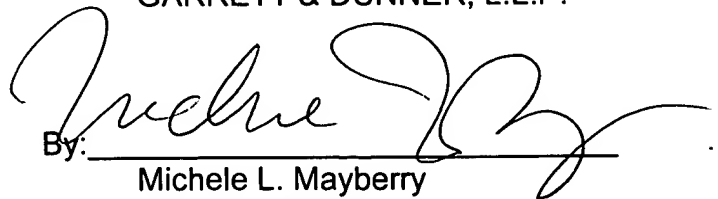
### III. Conclusion

In view of the foregoing Remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: \_\_\_\_\_  
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Reg. No. 45,644

Dated: November 26, 2003

Enclosure: 37 C.F.R. § 132 Declaration



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Patent

Application of: K. SHIMIZU

Serial Number : 09/900,961

Filed : July 10, 2001

For : CELLULOSE ESTER FILM, CELLULOSE ESTER DOPE,  
PROTECTIVE FILM OF POLARIZING PLATE AND POLARIZING PLATE

Group Art Unit: 1772

Examiner : Sow-Fun Fon

DECLARATION UNDER 37 C.F.R. 1.132

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

I, KUNIO SHIMIZU, hereby declare and say as follows:

That I am a post graduate from Hokkaido University  
having been awarded a Masters Degree in Technology in March  
1980.

That since April 1986, I have been employed by Konica  
Corporation, the owner of the above-identified application.  
During my employment, I have been engaged in the research  
and the study of polarizing plate materials in the Research  
and Development Laboratory of my company.

That I am a sole inventor of the present application.

That I am familiar with the subject matter of the  
present invention.

What follows is an accurate summary of experiments conducted according to my detailed instructions and under my personal supervision, and the results obtained therefrom.

#### Comparative tests

1. Iwashita et al. discloses the use of a cellulose triacetate film in the polarizing plate of the EXAMPLE 8, however, Iwashita et al. does not disclose a cellulose ester film containing any additive such as a plasticizer, much less a cellulose ester containing a specific polymer as claimed.

Mercurio et al. teaches the cellulose ester film with the polymer of less than 5,000 weight average molecular weight comprising methyl acrylate monomer, but does not disclose application of the cellulose ester film to the polarizing plate or the liquid crystal display as claimed.

Neither Iwashita et al. nor Mercurio et al. discloses the excellent results of the invention that provide excellent retardation, excellent retention property, or minimization of foreign materials or stains as shown in Table 1 on page 100 of the Specification.

2. In order to further show the unexpected results of the invention, additional comparative tests were carried out referring to Iwashita et al. and Mercurio et al.

3. Polarizing plate samples 9, 10, and 11 were prepared in the same manner as in Examples 9, 10 and 11 of the Specification, respectively. Comparative polarizing plate samples 12 and 13 were prepared in the same manner as in Comparative Examples 1 and 2 of the Specification,

respectively. Further, Comparative polarizing plate sample 15 (corresponding to Example 8 of Iwashita et al.) was prepared in the same manner as in Comparative Example 1 of the Specification, except that triphenyl phosphate was not used in the dope composition 12.

Polarizing plate samples 9, 10, and 11 employed the film sample containing as a plasticizer a polymer falling within the scope of the invention. Polarizing plate samples 12 and 13 employed the film sample containing as a plasticizer a compound falling outside the scope of the invention. Polarizing plate sample 15 employed the film sample containing no plasticizer.

4. Furthermore, polarizing plate samples 16, 17, 18, and 19 were prepared in the same manner as in polarizing plate sample 9, except that cellulose acetate butyrate films prepared in EXAMPLES 24 of Mercurio et al. were used instead of the cellulose triacetate film used in polarizing plate sample 9. Thus, polarizing plate sample 16 employed the film sample disclosed in EXAMPLE 24A of Mercurio et al. containing as a plasticizer a polymer (methyl methacrylate oligomer with an Mw of 750) falling within the scope of the invention. Polarizing plate sample 17 employed the film sample disclosed in EXAMPLE 24B of Mercurio et al. containing as a plasticizer a compound (polyester plasticizer with an Mw of 1,000) falling outside the scope of the invention. Polarizing plate sample 18 employed the film sample disclosed in EXAMPLE 24C of Mercurio et al. containing as a plasticizer a compound (monomeric phthalate ester plasticizer) falling outside the scope of the invention. Polarizing plate sample 19 employed the film sample disclosed in EXAMPLE

24D of Mercurio et al. containing no plasticizer.

5. The resulting samples were evaluated for retardation, retention property, and foreign materials or stains in the same manner as in Examples of the Specification.

The results are shown in Table 4.

Table 4

Polarizing plate sample No.	Plasticizer used	Retardation (nm)	Retention property (%)	Foreign materials or stains (rating)
9 (Inv.)	Polymer 9	9	0.4	A
10 (Inv.)	Polymer 10	18	1.2	A
11 (Inv.)	Polymer 11	16	1.5	A
12 (Comp.)	TPP	35	7.0	C
13 (Comp.)	EPEG	28	3.0	C
15 (Comp.)	None	28	0.2	A
16 (Inv.)	MMA oligomer	14	0.3	A
17 (Comp.)	PE	42	3.1	C
18 (Comp.)	MPE	45	4.2	C
19 (Comp.)	None	45	0.2	A

Inv.: Invention, Comp.: Comparative, TPP: Triphenyl phosphate, EPEG: Ethylphthalyl ethyl glycolate, MMA oligomer: Methyl methacrylate oligomer with an Mw of 750, PE: Polyester plasticizer with an Mw of 1,000, MPE: Monomeric phthalate ester plasticizer

As is apparent from Table 4 above, inventive polarizing plate samples 9, 10, 11 and 16 provide excellent retardation, excellent retention property, or excellent minimization of foreign materials or stains, as compared with the comparative polarizing plate samples 12, 13, 17 and 18 employing the cellulose ester film containing compounds other than the polymer falling within the scope of the invention or the comparative polarizing

plate samples 15 and 19 employing the cellulose ester film containing no plasticizer. Particularly, inventive polarizing plate sample 16 employing the film disclosed in Mercurio et al. provides excellent retardation, excellent retention property, and excellent minimization of foreign materials or stains, as compared with comparative polarizing plate samples 17 and 18 employing the film also disclosed in Mercurio et al., but containing compounds other than the polymer falling within the scope of the invention. Mercurio et al. does not disclose application of the cellulose ester film to the polarizing plate or the liquid crystal display as claimed nor the excellent results of the invention as described above. Iwashita et al. does not disclose the cellulose ester film containing the polymer as claimed nor the excellent results of the invention as described above. Therefore, the results obtained above are unexpected to one of ordinary skill in the art, and it would not have been obvious to one of ordinary skill in the art to attain the invention over Iwashita et al. in view of Mercurio et al.

In view of the above, we believe that instant claims 15 to 26 are in a situation of allowability.



I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: September 29, 2003

Kunio Shimizu  
KUNIO SHIMIZU